

Application No.: 10/052,329

Amdt dated: July 6, 2004

Reply to Office action of: April 8, 2004

**EXHIBIT A**

PTO-103P  
(Rev. 6-99)PROVISIONAL APPLICATION  
FILING RECEIPT

UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTORNEY DOCKET NO.	DRWGS	TOT CL	IND CL
60/151,496	08/30/99		\$75.00	RA-1828-AL	8		

RICHARD L MYERS ESQ  
26051 MERIT CIRCLE SUITE 103  
LAGUNA HILLS CA 92653

Receipt is acknowledged of this Provisional Application. This Provisional Application will not be examined for patentability. Be sure to provide the PROVISIONAL APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Provisional Application Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts of Application" ("Missing Parts Notice") in this application, please submit any corrections to this Filing Receipt with your reply to the "Missing Parts Notice." When the PTO processes the reply to the "Missing Parts Notice," the PTO will generate another Filing Receipt incorporating the requested corrections (if appropriate). This Provisional Application will automatically be abandoned twelve (12) months after its filing date and will not be subject to revival to restore it to pending status beyond a date which is after twelve (12) months from its filing date.

Applicant(s) CHARLES C. HART, HUNTINGTON BEACH, CA; SAID C. HILAL,  
COTO DE CAZA, CA.

IF REQUIRED, FOREIGN FILING LICENSE GRANTED 09/10/99 \*\* SMALL ENTITY \*\*  
TITLE  
SUTURE CLINCH WITH TRACTION ENHANCEMENT

RECEIVED  
SEP 15 1999  
BY: *le*

DATA ENTRY BY TWILITY MARSHALL TEAM 05 DATE: 09/10/99

Docket: RA-1828-AL

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application: Hart & Hilal )  
Serial No. To be Assigned ) BOX PROVISIONAL-PATENT  
Filed: Herewith ) APPLICATIONS  
For: SUTURE CLINCH WITH )  
TRACTION ENHANCEMENT )

EXPRESS MAIL MAILING LABEL NO. EL435375319US

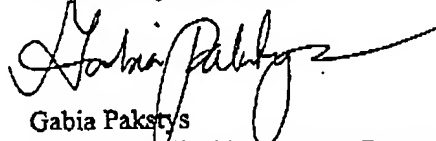
Date of Deposit: August 30, 1999

I hereby certify that the following documents, as identified below, are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. § 1.10 on the date indicated above and are addressed to the Box Provisional-Patent Applications, Assistant Commissioner for Patents, Washington, D. C. 20231:

1. Provisional Application Cover Sheet;
2. Verified Statement Claiming Small Entity - Independent Inventor;
3. Verified Statement Claiming Small Entity - Small Business Concern;
4. Specification (three (3) pages);
5. Informal drawings (eight (8) sheets);
6. Check No. 058971 in the amount of \$75.00; and
7. Return-receipt postcard.

Each of the above-identified documents is enclosed herewith.

Respectfully submitted,



Gabia Pakstys  
Applied Medical Resources Corporation

26051 Merit Circle, Suite 103  
Laguna Hills, CA 92653  
Telephone (949) 582-6120  
Facsimile (949) 582-6123

The United States Patent & Trademark Office  
official mailroom stamp affixed hereto acknowledges receipt of the documents indicated below

Applicant: Hart & Hilal  
U.S. Serial Number: To Be Assigned Docket: RA-1828-A1  
Filed: Herewith  
Title: SUTURE GUNGT WITH TRACTION TRANSDUCER  
Date Mailed: August 30, 1999 Date Due: \_\_\_\_\_

Enclosed:

- ☐ Patent Application transmittal ☐ deposit account authorization  
☐ Patent Application \_\_\_\_\_ pages \_\_\_\_\_ claims  
☒ Provisional Patent Application transmittal ☐ deposit account authorization  
☒ Provisional Patent Application 3 pages 1 claims  
☐ Trademark Application transmittal letter ☐ deposit account authorization

Trademark Application

3 specimens ☐ Statement of Use

Drawings: 8 sheet(s) of ☐ formal ☒ informal

Check number: 058971 in the amount of \$ 75

Declaration and/or Power of Attorney

Assignment ☐ Recordation Cover ☐ deposit account authorization

Small Entity Status form for: ☒ an individual ☒ a small business

Response to notice to file missing parts of application

Amendment transmittal letter ☐ deposit account authorization

Amendment/communication accompanying the amendment transmittal letter

Information Disclosure Statement

Form PTO 1449 ☐ copies of the \_\_\_\_\_ references listed

NASA Declaration

Issue Fee transmittal with deposit account authorization

Petition for an extension of time \_\_\_\_\_ month(s)

Status request letter

The United States Patent & Trademark Office  
official mailroom stamp affixed hereto acknowledges receipt of the documents indicated below

Applicant: Hart & Hilal  
U.S. Serial Number: To Be Assigned Docket: RA-1828-A1  
Filed: Herewith  
Title: SUTURE GUNGT WITH TRACTION TRANSDUCER  
Date Mailed: August 30, 1999 Date Due: \_\_\_\_\_

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☒ Provisional Patent Application transmittal ☐ deposit account authorization  
☒ Provisional Patent Application 3 pages 1 claims  
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☐ Trademark Application  
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Issue Fee transmittal with deposit account authorization

Petition for an extension of time \_\_\_\_\_ month(s)

Status request letter

Certificate of Mailing by ☒ Express Mail ☐ first class mail

058971

APPLIED MEDICAL RESOURCES CORP. 26051 Merit Circle, Building 104, Laguna Hills, CA 92653

CHECK NO.

VENDOR: 030198

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083791	1828-RA	08/20/99	75.00	75.00	.00	75.00
Check Total						75.00

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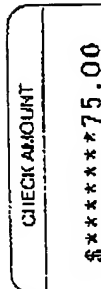
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58971	08/23/99	030198

Void After Six Months

**Silicon Valley Bank**  
 38 Technology Dr., Suite 150  
 Irvine, CA 92618  
 949-40391211

**APPLIED**  
 26051 MERIT CIRCLE  
 BUILDING 104  
 LAGUNA HILLS, CA 92653  
 949-582-0120 FAX 949-582-6243  
 UROLOGY • UROLOGY • GENERAL SURGERY



SEVENTY-FIVE AND 00/100 DOLLARS

PAY TO THE ORDER OF  
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 AND TRADEMARKS

*N. Telserfeld*

AUTHORIZED SIGNATURE

THE REVERSE SIDE OF THIS DOCUMENT INCLUDES AN ARTIFICIAL WATERMARK - HOLD AT AN ANGLE TO VIEW

058971 1211403991 06005152170

PTO/SB/16/5-55  
Approved for use through 04/1/1998. OMB 0551-2007  
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

PROVISIONAL APPLICATION COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION under 37 CFR § 1.53 (b)(2).

Docket Number		RA-1828-AL		Type a plus sign (+) inside this box if		+	
INVENTOR(S) / APPLICANT(S)							
LAST NAME		FIRST NAME		MIDDLE INITIAL	RESIDENCE (CITY AND EITHER STATE, OR FOREIGN COUNTRY)		
HART HILAL		CHARLES SAID		C.	Huntington Beach, California Coto de Caza, California		
TITLE OF THE INVENTION (250 characters maximum)							
SUTURE CLINCH WITH TRACTION ENHANCEMENT							
CORRESPONDENCE ADDRESS							
Richard L. Myers, Esq. 26051 Merit Circle, Suite 103 Laguna Hills, CA 92653							
STATE	CALIFORNIA	ZIP CODE	92653	COUNTRY	USA		
ENCLOSED APPLICATION PARTS (check all that apply)							
<input checked="" type="checkbox"/>	Specification / claims / abstract	Number of Pages	3	<input checked="" type="checkbox"/>	Small entity statement (Independent inventor)		
<input checked="" type="checkbox"/>	Drawings	Number of Sheets	8	<input checked="" type="checkbox"/>	Other (specify): Small entity statement (small business)		
METHOD OF PAYMENT (check one)							
<input checked="" type="checkbox"/>	A check or money order is enclosed to cover the Provisional filing fee				PROVISIONAL FILING FEE AMOUNT (\$):	\$75.00	
<input checked="" type="checkbox"/>	The Commissioner is hereby authorized to charge filing fees and credit deposit. Account Number:				01-2215		

The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.

☒ No.

☐ Yes, the name of the U.S. government agency and the government contract number are: \_\_\_\_\_

Respectfully submitted,

Dated: Aug. 18, 1999

By: 

RICHARD L. MYERS  
Registration No. 26,490

☐ Additional inventors are being named on separately numbered sheets attached hereto.

Applicant or Patentee: Hart & Hilal  
Serial or Patent No.: To be Assigned  
Filed or Issued: Herewith  
Title: SUTURE CLINCH WITH TRACTION ENHANCEMENT

Docket No. RA-1828-AL

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS  
(37 C.F.R. §§ 1.9(f) and 1.27(b))—INDEPENDENT INVENTOR

As a below-named inventor, I hereby declare that I qualify as an independent inventor as defined in 37 C.F.R. § 1.9(c) for purposes of paying reduced fees under Section 41(a) and (b) of Title 35, United States Code, to the Patent and Trademark Office with regard to the invention entitled: SUTURE CLINCH WITH TRACTION ENHANCEMENT, described in:

- ☒ the specification filed herewith;  
☐ application serial no. \_\_\_\_\_, filed \_\_\_\_\_; or  
☐ patent no. \_\_\_\_\_, issued \_\_\_\_\_.

I have not assigned, granted, conveyed, or licensed and am under no obligation under contract or law to assign, grant, convey, or license any rights in the invention to any person who could not be classified as an independent inventor under 37 C.F.R. § 1.9(c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37 C.F.R. § 1.9(d) or a nonprofit organization under 37 C.F.R. § 1.9(e).

Each person, concern, or organization to which I have assigned, granted, conveyed, or licensed or am under an obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed below:

- ☐ no such person, concern, or organization  
☒ persons, concerns or organizations listed below\*

\*NOTE: Separate verified statements are required from each named person, concern, or organization having rights to the invention averring to their status as small entities. (37 C.F.R. § 1.27)

FULL NAME: APPLIED MEDICAL RESOURCES CORPORATION  
ADDRESS: 26051 Merit Circle, Suite 103, Laguna Hills, California 92653  
☐ INDIVIDUAL ☒ SMALL BUSINESS CONCERN ☐ NON-PROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 C.F.R. § 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

CHARLES C. HART

SAID HILAL

Signature of Inventor

Signature of Inventor

Date: \_\_\_\_\_

Date: \_\_\_\_\_

Applicant or Patentee: Hart & Hilal  
Serial or Patent No.: To be Assigned  
Filed or Issued: Herewith  
Title: SUTURE CLINCH WITH TRACTION ENHANCEMENT

Docket No.: RA-1828-AL

**VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS**  
**(37 CFR §§ 1.9(f) & 1.27(e))—SMALL BUSINESS CONCERN**

I hereby declare that I am:

- ☐ the owner of the small business concern identified below.  
☒ an official of the small business concern empowered to act on behalf of the concern identified below.

NAME OF SMALL BUSINESS CONCERN: APPLIED MEDICAL RESOURCES CORPORATION  
ADDRESS OF SMALL BUSINESS CONCERN: 26051 Merit Circle, Suite 103, Laguna Hills, California 92653

I hereby declare that the above-identified small business concern qualifies as a small business concern as defined in 13 C.F.R. § 121.12, and reproduced in 37 C.F.R. § 1.9(d), for purposes of paying reduced fees to the United States Patent and Trademark Office, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time, or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention, entitled: SUTURE CLINCH WITH TRACTION ENHANCEMENT, by inventor(s): CHARLES C. HART and SAID HILAL, described in:

- ☒ the specification filed herewith.  
☐ application serial no. \_\_\_\_\_, issued \_\_\_\_\_.  
☐ patent no. \_\_\_\_\_, issued \_\_\_\_\_.

If the rights held by the above-identified small business concern are not exclusive, each individual, concern or organization having rights in the invention is listed below\* and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 C.F.R. § 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 C.F.R. § 1.9(d), or a nonprofit organization under 37 C.F.R. § 1.9(e). \*NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 C.F.R. § 1.27)

NAME: APPLIED MEDICAL RESOURCES CORPORATION  
ADDRESS: 26051 Merit Circle, Suite 103, Laguna Hills, CA 92653  
☐ INDIVIDUAL ☒ SMALL BUSINESS CONCERN ☐ NON-PROFIT ORGANIZATION

NAME: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NON-PROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 C.F.R. § 1.28(b))

I hereby declare that all statement made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statement were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

Name of person signing: NABIL HILAL  
Title of person if other than owner: Senior Vice-President  
Address of person signing: 26051 Merit Circle, Suite 103, Laguna Hills, CA 92653

SIGNATURE

DATE

8/26/99



SUTURE CLINCH WITH  
TRACTION ENHANCEMENT

Background of the Invention

Field of the Invention

This invention relates generally to surgical clips and clamps, and clinches adapted for use with sutures.

Discussion of the Prior Art

In the surgical environment, clips and clamps have been used for removably holding two objects in close proximity. These objects may be tissue or surgical devices such as sutures.

Clips and clamps may be of the variety disclosed and claimed by Applicant in U.S. provisional patent application serial no. 60/040,655, filed March 10, 1997, and entitled "Surgical Clips and Clamps". Suture clinches of the past are well-represented by Applicant's U.S. patent application serial no. 09/082,495, filed May 21, 1995, and entitled "Suture Clinch". Both of these applications are incorporated herein by reference. In the latter regard, a metal clinch is stamped from a sheet of metal and preformed to operate with a clinch applier. The two free ends of a suture are disposed within the clinch, which is slid down the suture ends until a tight suture is achieved. Then the applier is activated to reform the clinch binding the suture ends into a fixed relationship.

In the case of the metallic clinches, the metal-to-suture interface tends to provide a high coefficient of friction that initially inhibits the sliding step of the process. Ultimately, the metal-to-suture interface may provide a lower coefficient of friction than that desired to lock the suture ends in a fixed relationship.

Summary of the Invention

In accordance with the present invention, a coating is provided on the clip, clamp, or clinch in order to facilitate one or more of the steps in its operation. With respect to the suture

clinch, the coating is contemplated which would initially facilitate the sliding step by providing a reduced coefficient of friction with the sutures. Another type of coating might provide an increased coefficient of friction with the sutures, thereby facilitating traction-enhancement during the locking step. More than one coating may be applied to facilitate an initial stage, as well as an ultimate stage of operation.

Any coating applied to a suture clinch would tend to function as an occlusive cushion to inhibit abrasion between sharp edges and corners of the clinch and the suture material. For traction-enhancement, any material can be used as a coating to produce an increased coefficient of friction with the suture material. In a preferred embodiment, the material chosen is identical to that of the suture material, since similar or identical materials normally exhibit increased frictional resistance to slipping. A more compliant material might be chosen for the traction-enhancement coating in order to increase the area of contact between the clinch and the suture. By increasing the area of contact, elevated compressive pressures need not be applied to securely hold the suture.

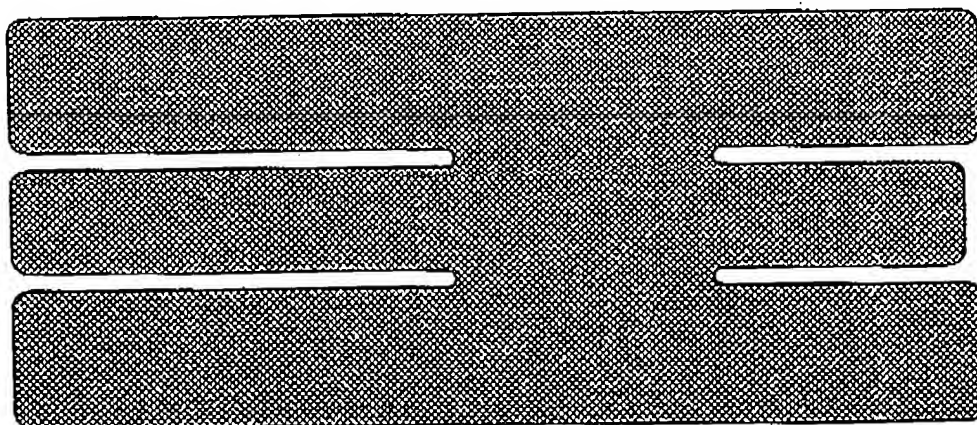
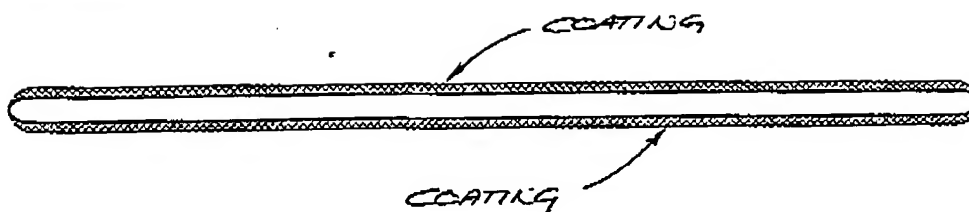
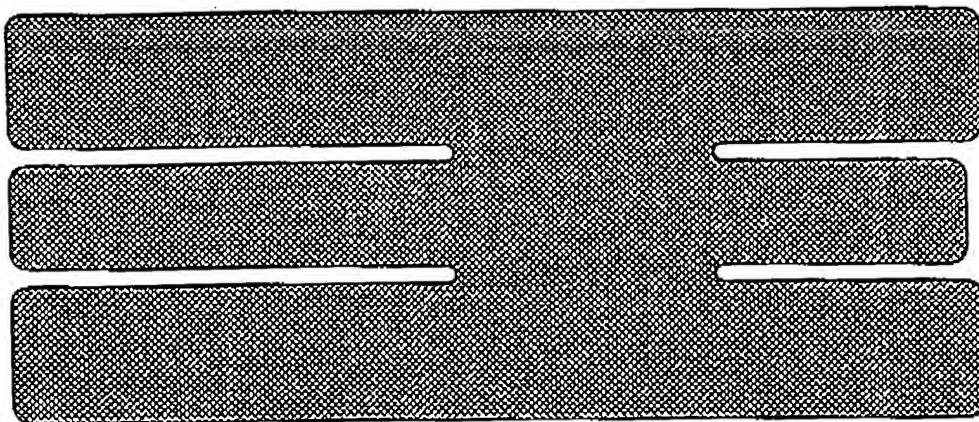
The traction-enhancement coating might also be selected to enhance the holding ability with a reabsorbable suture. This permits those portions of the suture distant from the clinch to be reabsorbed, while the suture in the clinch is protected from the absorption process. In preferred embodiments, the traction-enhancing coating includes plastics such as polypropylene or polyethylene.

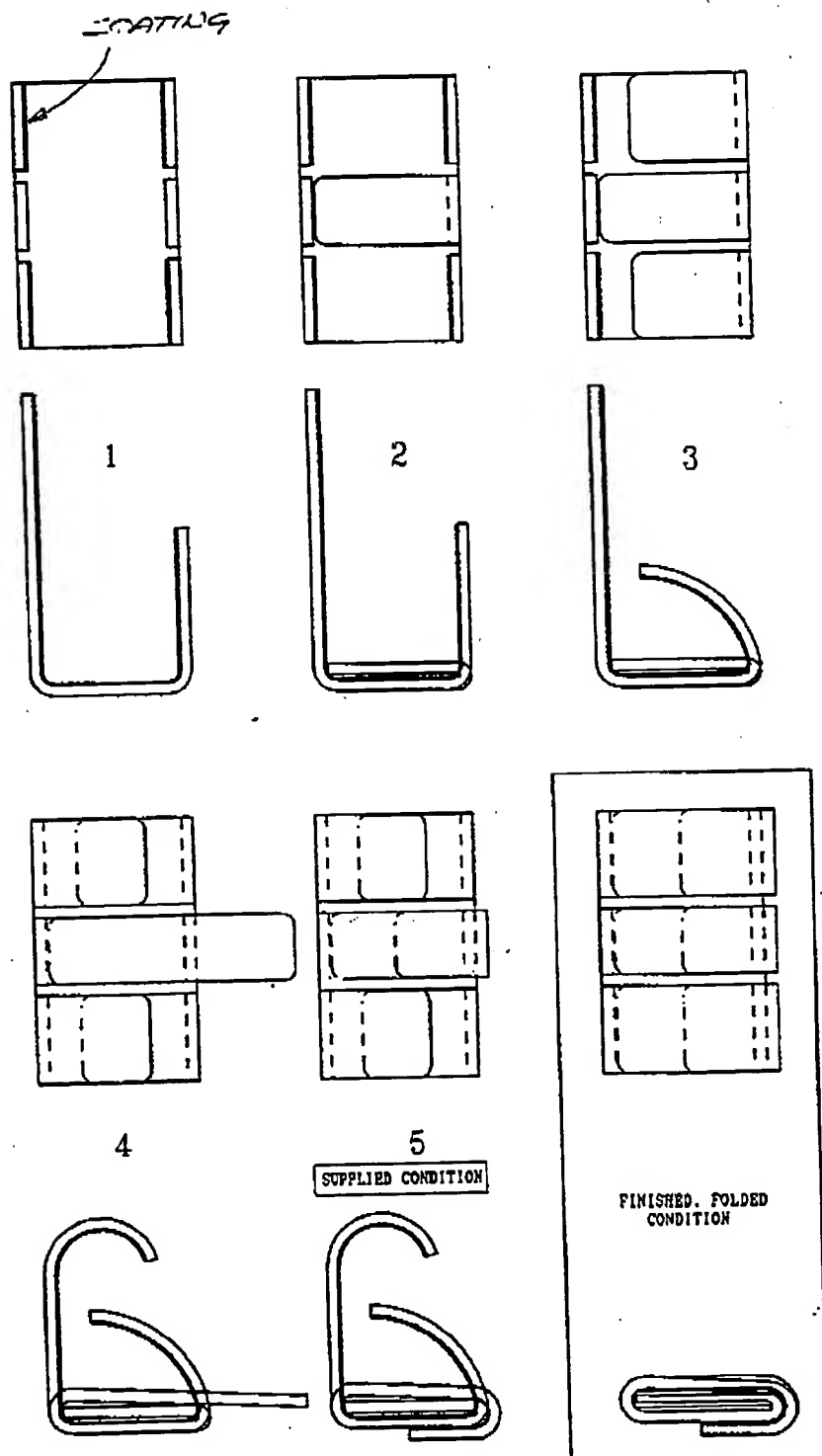
A lubricious coating could be applied to facilitate the sliding of the clinch along the suture ends. In this case, a reduced coefficient of friction is desirable. A coating of hydrophilic or hydrophilic-hydrophobic material is contemplated to provide the desired lubricity. In a further embodiment, the clinch is coated with two layers of material in a laminate. The first layer is coated on the metallic clinch to provide traction-enhancement. The second layer is coated on the first layer. Initially, the second layer contacts the suture and provides the desired lubricity for sliding the clinch into place. With the hydrophilic coating, moisture is attracted to provide the desired lubricity. As the second layer is obliterated by movement of the suture during the sliding step, the first substrate is exposed and ultimately compressed against the suture in the locking step. Alternatively, the second layer may be displaced by the compression of the clinch upon the

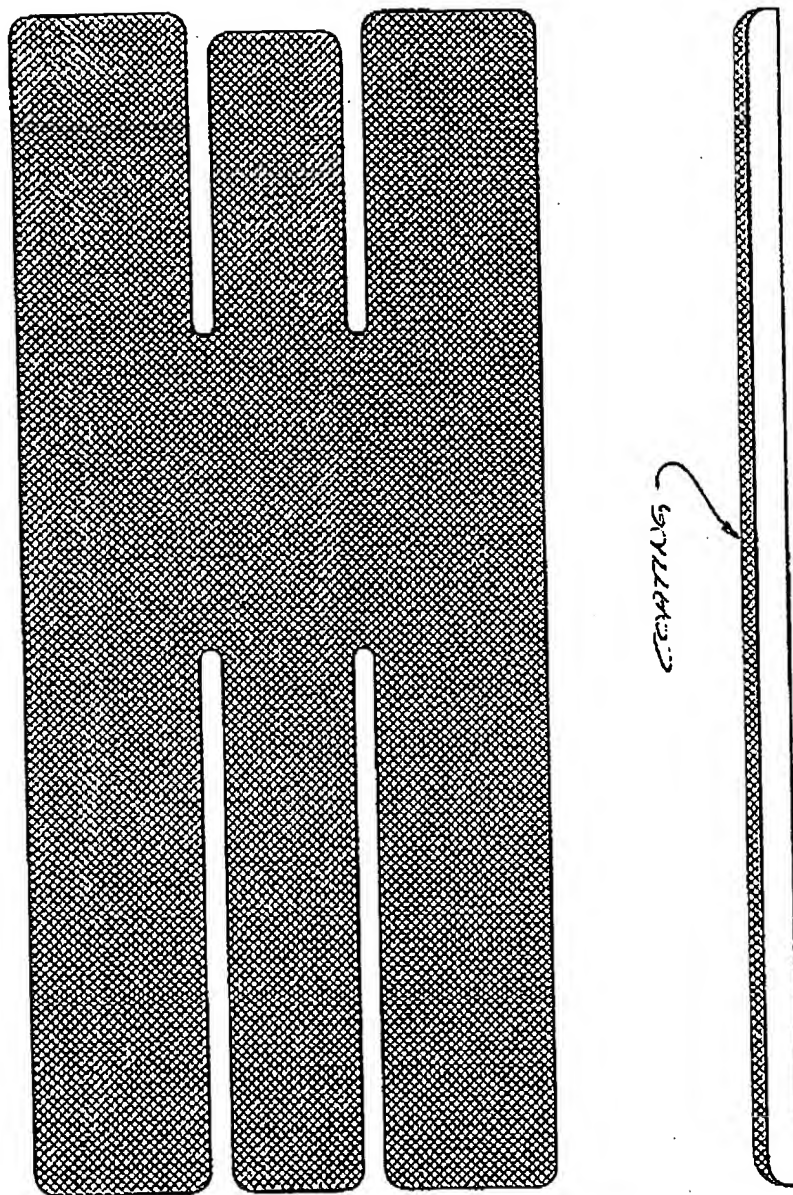
suture. In either case, once the clinch is operatively disposed in its desired position, the first traction-enhancing coating engages the suture ends to lock the suture.

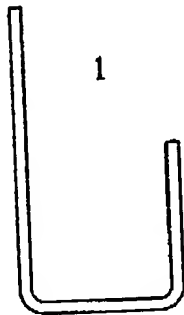
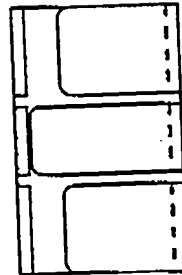
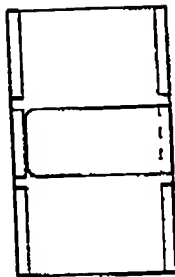
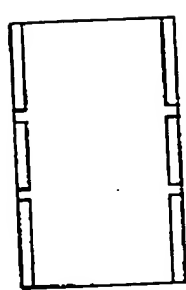
The coatings can be applied in accordance with any known method for coating objects. Dip-coating is initially contemplated, but dispersions, solid castings, insert moldings, and spraying may also be appropriate. The coatings can be separately formed and adhered to the metallic base in a further process. Typically, the laminate or coating will be applied to the clinch while it is in the flat-formed condition.

The patent applications referenced above are incorporated herein by reference. The associated drawings (copies attached) are merely representative of any type of clip, clamp, or clinch configuration in the prior art.

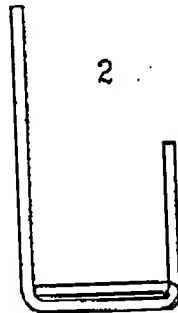




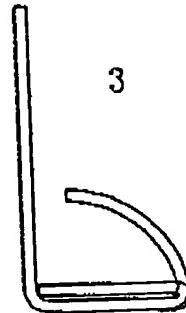




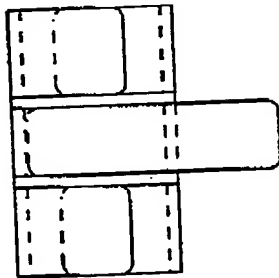
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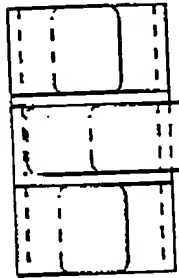
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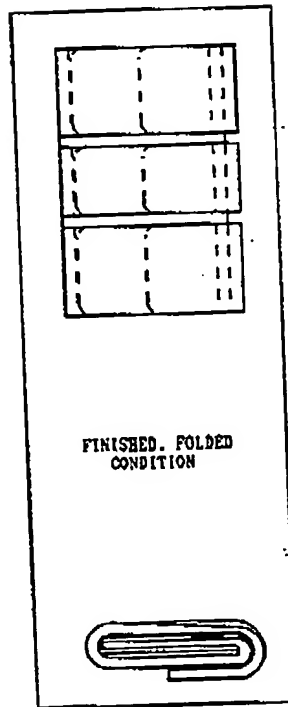
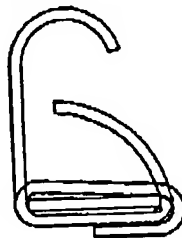
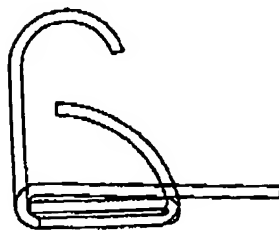


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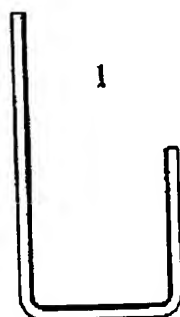
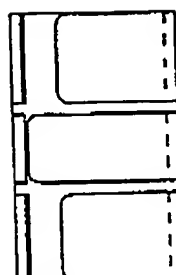
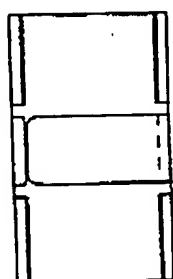
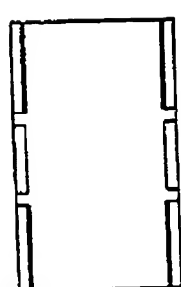


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SUPPLIED CONDITION



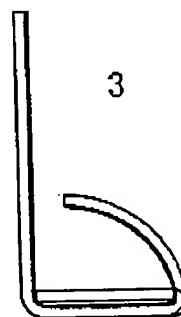
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CONDITION



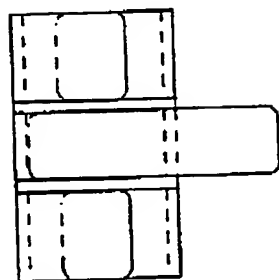
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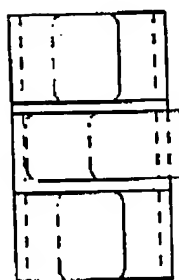
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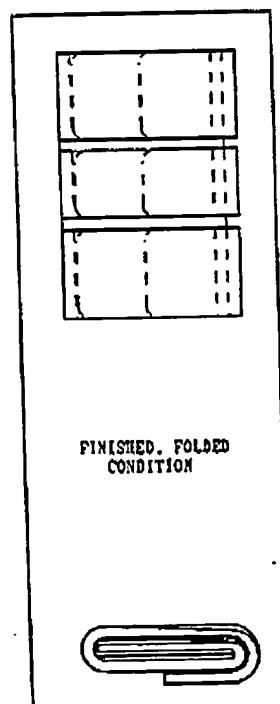
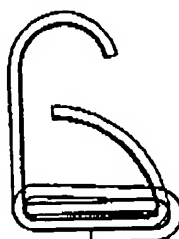
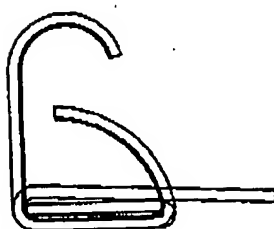


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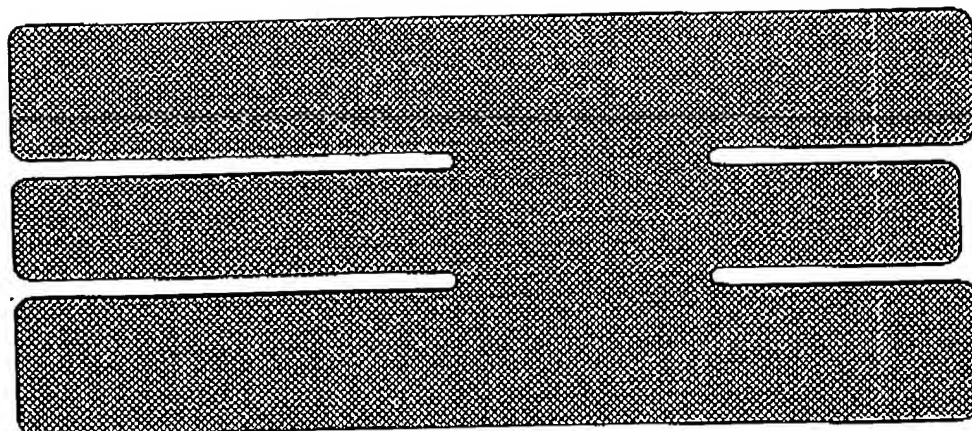
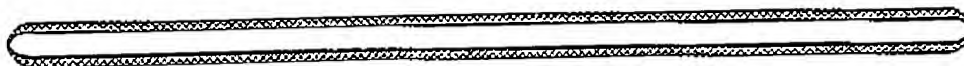
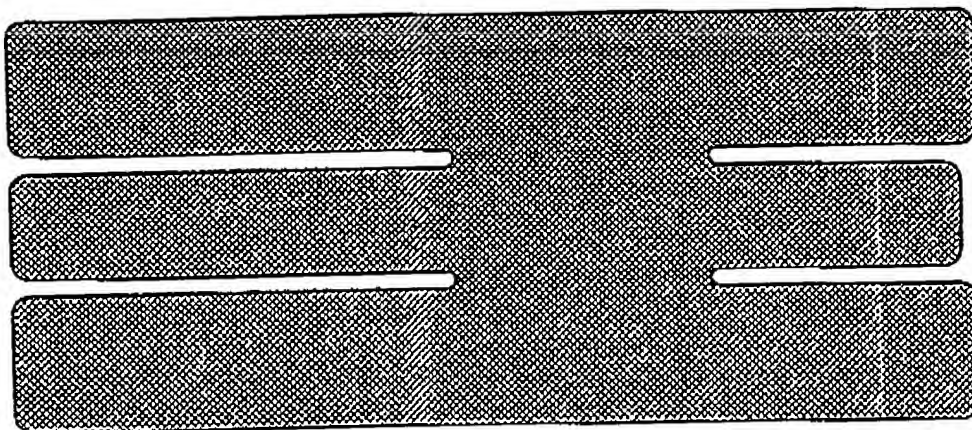
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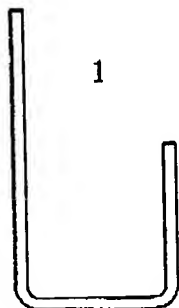
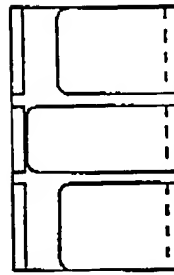
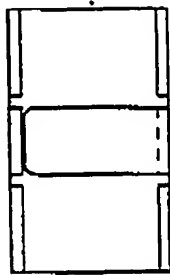
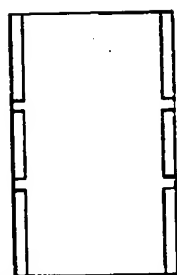
SUPPLIED CONDITION



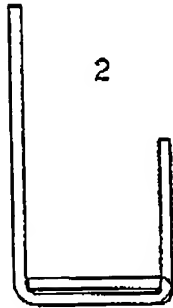
FINISHED, FOLDED  
CONDITION



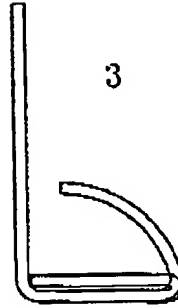




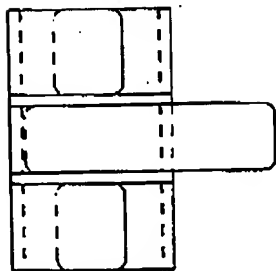
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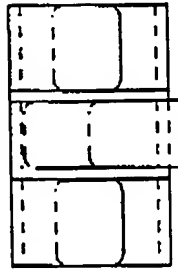
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3

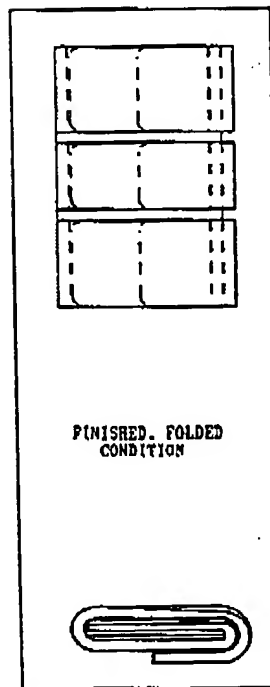
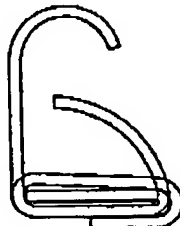
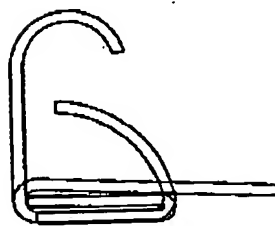


4



5

SUPPLIED CONDITION



FINISHED, FOLDED  
CONDITION

